

## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

AWAPATENT AB  
P.O. Box 45086  
S-104 30 Stockholm  
SUÈDE

Date of mailing (day/month/year) 09 March 2000 (09.03.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference PC-2008160	
International application No. PCT/SE99/00963	International filing date (day/month/year) 04 June 1999 (04.06.99)

1. The following indications appeared on record concerning:		
<input checked="" type="checkbox"/> the applicant	<input type="checkbox"/> the inventor	<input type="checkbox"/> the agent
<input type="checkbox"/> the common representative		
Name and Address ABB AB S-721 83 Västerås Sweden	State of Nationality SE	State of Residence SE
	Telephone No. +46 21 32 50 00	
	Facsimile No. +46 21 13 41 12	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input checked="" type="checkbox"/> the person	<input checked="" type="checkbox"/> the name	<input checked="" type="checkbox"/> the address
<input checked="" type="checkbox"/> the nationality	<input checked="" type="checkbox"/> the residence	
Name and Address FLOW HOLDINGS GMBH (SAGL) LIMITED LIABILITY COMPANY Casella Postale 125 CH-6919 Carabietta Switzerland	State of Nationality CH	State of Residence CH
	Telephone No. +41 91 980 12 20	
	Facsimile No. +41 91 980 12 25	
	Teleprinter No.	
3. Further observations, if necessary: <b>Applicant in Box I has assigned his rights to Applicant in Box II.</b>		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned	
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer F. Baechler
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

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NOTIFICATION OF THE RECORDING  
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S-104 30 Stockholm  
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Date of mailing (day/month/year) 09 March 2000 (09.03.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference PC-2008160	
International application No. PCT/SE99/00963	International filing date (day/month/year) 04 June 1999 (04.06.99)

1. The following indications appeared on record concerning:	
<input type="checkbox"/> the applicant	<input type="checkbox"/> the inventor <input checked="" type="checkbox"/> the agent <input type="checkbox"/> the common representative
Name and Address ABB AB Patent S-721 78 Västerås Sweden	State of Nationality
	State of Residence
	Telephone No. + 46 21 32 30 00
	Facsimile No. + 46 21 18 13 86
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:	
<input checked="" type="checkbox"/> the person	<input checked="" type="checkbox"/> the name <input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence
Name and Address AWAPATENT AB P.O. Box 45086 S-104 30 Stockholm Sweden	State of Nationality
	State of Residence
	Telephone No. + 46 84 40 95 00
	Facsimile No. + 46 84 40 95 50
3. Further observations, if necessary: New agent's file reference is PC-2008160.	
4. A copy of this notification has been sent to:	
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer F. Baechler
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

## TENT COOPERATION TRE.

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
United States Patent and Trademark  
Office  
Box PCT  
Washington, D.C.20231  
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 09 March 2000 (09.03.00)	
International application No. PCT/SE99/00963	Applicant's or agent's file reference KN 8446 WO
International filing date (day/month/year) 04 June 1999 (04.06.99)	Priority date (day/month/year) 09 June 1998 (09.06.98)
Applicant LÖNNEBORG, Nils-Gunnar	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

04 January 2000 (04.01.00)

☐ in a notice effecting later election filed with the International Bureau on:
2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer F. Baechler Telephone No.: (41-22) 338.83.38
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# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PC-2008160	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SE99/00963	International filing date ( <i>day/month/year</i> ) 04.06.1999	Priority date ( <i>day/month/year</i> ) 09.06.1998
International Patent Classification (IPC) or national classification and IPC <sup>7</sup> B01J 3/06 // A23L 3/015, B22F 3/15		
Applicant FLOW HOLDINGS GMBH (SAGL) LIMITED et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
04.01.2000	17.08.2000
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88	Authorized officer  Mårten Hulthén/MP Telephone No. 08-782 25 00

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00963

## I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

☐ the international application as originally filed.

☒ the description, pages 1-10, as originally filed,  
pages \_\_\_\_\_, filed with the demand,  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☒ the claims, Nos. \_\_\_\_\_, as originally filed,  
Nos. \_\_\_\_\_, as amended under Article 19,  
Nos. \_\_\_\_\_, filed with the demand,  
Nos. 1-12, filed with the letter of 11.07.2000,  
Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☒ the drawings, sheets/fig 1-6, as originally filed,  
sheets/fig \_\_\_\_\_, filed with the demand  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/fig \_\_\_\_\_

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00963

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	<u>1-12</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-12</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-12</u>	YES
	Claims		NO

**2. Citations and explanations**

Amended claims 1-12 were filed on 11 July, 2000. New claims 2-4 and 8-9 have been added.

The invention relates to a high pressure press with a replaceable wear liner that is arranged in a state of radial compressive stress. The liner is fixed in the cylindrical high pressure chamber by expanding it radially under excess pressure.

Document WO 9521690 (page 7, lines 10-16; page 8, line 36 - page 9, line 3; fig. 1-2, 4; claims 1,6) discloses a high pressure press with a wear liner that is fixed in a state of compressive stress. However, it does not show that the liner is fixed by "expansion by inner pressure above the yield point" as stated in claim 1. On the other hand, document EP 13297 (claim 1, page 1, 1<sup>st</sup> paragraph; page 8, lines 4-12) reveals a cylindrical plastic processing machine with a replaceable wear liner. The liner is fixed by internal expansion to a state at least close to the yield point so that the liner is under compressive stress.

However, it is not considered obvious to a person skilled in the art to consult the field of plastic processing when solving problems concerning a high pressure press as stated in claim 1. The problems involved when working with very high pressures are considered to differ substantially from the problems involved with extruders and injection moulding machines. Further, the invention obviates the need for an expensive wear liner holder which makes it possible to place the wear liner in direct contact with the interior surface of the pressure chamber, as stated in claim 7. Document WO 9521690 does not show such an embodiment. Therefore, the above-mentioned documents are reconsidered not to be of particular relevance.

.../...

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE99/00963

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V.

Other documents cited in the search report are considered less relevant than the above-mentioned documents.

With respect to the arguments presented above, claims 1-12 are considered to involve an inventive step. The invention is also considered to fulfil the criteria of industrial applicability.

CLAIMS

1. A method to provide a high pressure press comprising a cylindrical pressure chamber (2) and a replaceable wear liner (1), characterised by the steps of
- 5 -inserting said wear liner (1) into said cylindrical pressure chamber (2)
- fixing said wear liner (1) in place with expansion by inner pressure above the yield point, such that said wear liner (1) is thereby arranged in a state of residual
- 10 compressive stress by the increase in diameter of said wear liner (1).
2. A method according to claim 1, characterised by closing the press and applying an inner fluid pressure to
- 15 said wear liner (1) inside the press, so as to provide said residual compressive stress.
3. A method according to claim 2, characterised by said inner fluid being supplied by an external pressure source
- 20 connected to the press.
4. A method according to any one of claims 1-3, characterised in that said wear liner (1) is plastically deformed, so as to provide said residual compressive
- 25 stress.
5. A method according to any one of claims 1-4, characterised in that the method further comprises the step of removing an existing wear liner (1) which
- 30 replacement includes the steps of
- making one or more cuts in the inner surface of the existing said wear liner (1) with the intention of causing the existing said wear liner (1) to collapse under the residual compressive stress,



-removing the collapsed existing said wear liner (1).

6. A method according to claim 5, characterised in that  
the one or more cuts (10) which are made in the inner  
5 surface of the existing said wear liner (1) are  
approximately square in cross section.

7. A high pressure press comprising a cylindrical  
pressure chamber (2) and a replaceable wear liner (1)  
10 arranged inside the cylindrical pressure chamber (2) in a  
state of residual compressive stress, characterised in  
that the exterior surface of said wear liner (1) is in  
direct contact with the interior surface of said  
cylindrical pressure chamber (2).

15

8. A high pressure press according to claim 7,  
characterised in that the wear liner (1) is shaped as a  
thin walled, circular cylinder.

20 9. A high pressure press according to any one of claims  
7-8, characterised in that the wear liner (1) is  
plastically deformed, as a result of an expansion of the  
wear liner after its insertion into the pressure  
chamber (2), so that a residual compressive stress is  
25 provided.

10. The use of a high pressure press according to any one  
of claims 7-9 for the treatment of substances.

30 11. The use of a high pressure press according to any one  
of claims 7-9 for the isostatic pressing of powder pre-  
form products.

12. The use of a high pressure press according to any one  
35 of claims 7-9 for the isostatic pressing of castings.

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

2

Applicant's or agent's file reference B-2545-WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CH98/00248	International filing date (day/month/year) 09 June 1998 (09.06.98)	Priority date (day/month/year) 09 June 1998 (09.06.1998)
International Patent Classification (IPC) or national classification and IPC B23Q 7/00		
Applicant CODAFI S.A.R.L.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 09 December 1999 (09.12.99)	Date of completion of this report 07 July 2000 (07.07.2000)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH98/00248

## I. Basis of the report

1. This report has been drawn on the basis of (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

- ☐ the international application as originally filed.
- ☒ the description, pages 1-9, as originally filed,  
 pages \_\_\_\_\_, filed with the demand,  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☒ the claims, Nos. 1-14, as originally filed,  
 Nos. \_\_\_\_\_, as amended under Article 19,  
 Nos. \_\_\_\_\_, filed with the demand,  
 Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☒ the drawings, sheets/fig 1/7-7/7, as originally filed,  
 sheets/fig \_\_\_\_\_, filed with the demand,  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

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 APR 11 2001  
 TECHNOLOGY CENTER 3700

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH 98/00248

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-13	YES
	Claims		NO
Inventive step (IS)	Claims	1-13	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO

## 2. Citations and explanations

Reference is made to the following documents:

D1: DE-A-3 233 658 (FECHENBACH-COLLENBERGER) 15  
March 1984;  
D2: EP-A-0 348 763 (WEERTH-HANDLING SYSTEME)  
January 1990.

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TECHNOLOGY CENTER 3700

Document D1, which is considered to represent the most relevant prior art, discloses a machine-tool supply device from which the subject matter of Claim 1 differs in that the device comprises:

- a fixed container able to hold a store of bars, longitudinally stacked in bulk, having an upper rectilinear longitudinal edge;
- a receptacle adjacent to said upper edge of the first container and extending above the supply channel;
- at least one repeat-action grasping mechanism, arranged so as to grasp from the container at least one portion of a bar and pull it up to a certain position located above the receptacle;
- at least one alignment mechanism comprising one or more members which move in a longitudinal direction and gradually withdraw the whole of the grasped bar

from the container so as to place all of it in the receptacle, and

- control means allowing the bar to be released and to fall to the bottom of the receptacle and then into the supply channel.

The subject matter of Claim 1 is therefore novel (PCT Article 33(2)).

The problem to be solved by the present invention can therefore be considered that of creating a supply mechanism for storing a large number of bars and functioning in an entirely reliable manner, even where the diameter of the bars is small.

The solution to this problem, as proposed in Claim 1 of the present application, is considered to involve an inventive step (PCT Article 33(3)), for the following reasons:

Neither D1 nor D2 discloses or suggests a machine-tool supply device with the features of Claim 1 (PCT Article 33(3)).

The invention proposes in a non-obvious manner alternative means for arranging the edge of the first container and the grasping mechanism, together with a new alignment mechanism for handling one by one-bars of small diameter.

Claims 2 to 13 are dependent on Claim 1 and therefore also satisfy, as such, the requirements of the PCT as regards novelty and inventive step.

The subject matter of the present application is undoubtedly industrially applicable (PCT Article 33(4)).

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# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH 98/00248

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The features included in the claims do not contain any reference signs placed between parentheses (PCT Rule 6.2(b)).

The description does not cite any documents reflecting the prior art described on page 1 (PCT Rule 5.1(a)(ii)). Contrary to the requirements of PCT Rule 5.1(a)(ii), the description does not indicate the relevant prior art disclosed in D1, nor does it cite that document.